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UNITED STATES NAVY

MEDICAL NEWS LETTER

Vol. 40 Friday, 3 August 1962 No. 3

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Policy

The U. S. Navy Medical News Letter is basically an official Medical Department publication inviting the attention of officers of the Medical Department of the Regular Navy and Naval Reserve to timely up-to-date items of official and professional interest relative to medicine, dentistry, and allied sciences. The amount of information used is only that necessary to inform adequately officers of the Medical Department of the existence and source of such information. The items used are neither intended to be, nor are they, susceptible to use by any officer as a substitute for any item or article in its original form. All readers of the News Letter are urged to obtain the original of those items of particular interest to the individual.

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Change of Address

Please forward changes of address for the News Letter to: Commanding Officer, U. S. Naval Medical School, National Naval Medical Center, Bethesda 14, Md., giving full name, rank, corps, and old and new addresses.

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The issuance of this publication approved by the Secretary of the Navy on 28 June 1961.

The Bizeau First Aid Roll

By Bud Nagel JO2, Naval Air Station Los Alamitos NEWS, Long Beach, California.

If necessity is the mother of invention, imagination can claim to be the proud father, and hospital corpsman Orville George Bizeau HM1 has put both parents to work in solving a medical problem.

Several years ago while stationed at NAS Grosse Ile, Bizeau rushed with his ambulance to the scene of an air crash, grabbed the conventional type doctor's bag and began his mercy mission, caring for the immediate needs of several persons who were injured.

At the side of the first victim he searched in the bag for a first-aid item that was not easy to locate in the assortment of medical and surgical supplies and equipment. Time was a major factor and the conventional bag did not appear to lend itself well to the speedy service desired. He removed the contents of the bag and after more search found the item he so desperately sought. When finished he scooped up the supplies, placed them in the bag, and moved on to the next casualty. The same routine was necessary.

Preliminary work out of the way and the victims securely placed in the ambulance, Bizeau pondered over this problem all the way to the hospital. He grumbled to himself, "There's got to be a more efficient way." For days he thought about it, made plans, and drew preliminary sketches. The result was a canvas first aid roll to take the place of the usual bag.

The Bizeau roll is carried to the emergency scene the same as the old medical bag. A seal is broken, the canvas unrolled, and there—in full and easy view—are 27 different types of instruments and supplies neatly held in individual compartments. Without groping or guesswork, they are ready for immediate selection. The seal is the sign the roll has been inspected and its contents are complete.

In July 1959, Bizeau was transferred to Los Alamitos Naval Air Station and again was traveling with the old companion, the traditional medical bag. One night he answered a call in Long Beach where a Station Navy man had severe cuts. Out came the black bag with its usual drawbacks. Although Bizeau lost some time in locating the desired first-aid material, the injured man survived. According to Bizeau, however, the patient could well have died of hemorrhage in the time consuming process.

This episode was all that was needed to introduce Los Alamitos to the Bizeau roll. Another plan was drawn up, sent to the parachute shop, and out came the canvas bag ready to be placed in operation. Two more Bizeau rolls are now being planned to equip the other ambulance units at Los Alamitos.

To the ingenuity of one hospital corpsman, Orville Bizeau, 17 years in the Navy, and his concern for others, we owe much for alleviating pain and the saving of perhaps one or more lives. His services are observed with more than casual interest by the medical profession.

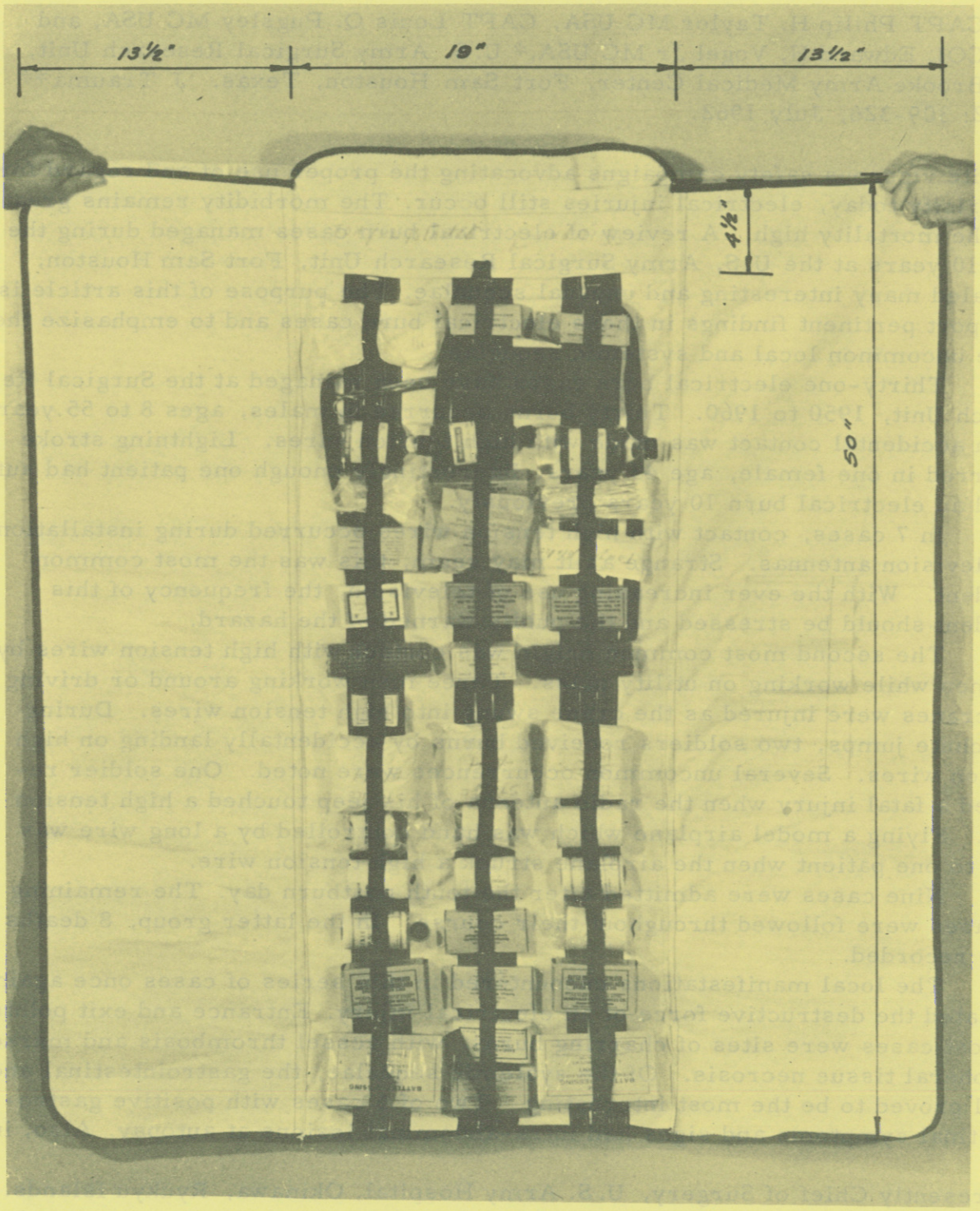
NOTE: CAPT H. J. Bowen MC USN, Director, Materiel Division, Bureau of Medicine and Surgery, submitted the above information as well as the following

list and photograph of contents of the Bizeau roll. In addition to the first-aid list, completely equipped Doctor's bags and ambulance items are always on hand for emergencies at the Naval Air Station Los Alamitos. These include a special stimulant kit, intravenous sedative drugs, syringes, H_2O for injection, Amyl Nitrite, Glyceryl Trinitrate, antiseptics, IV Dextrose and Dextran, diagnostic instruments, splints, lantern, emesis basin, urinal, resuscitator-inhalator-aspirator, air-way kit, and other supplies. All of these, in addition to the Bizeau roll, represent planning which is highly commendable. —Editor

Contents of Bizeau First-Aid Roll

Stock Number	Description	Unit	Quantity
6505-106-1075	Ammonia Amp., 2cc	Pkg	1
6505-106-0875	Ammonia Inhalants (Pearls)	Pkg	1
6505-128-5705	Merthiolate, Tr.	Oz	8
6505-133-6000	Liquid Petrolatum	Oz	8
	Alcohol 70% (Denatured)	Oz	8
6510-200-2185	Bandage, Elastic 2 inch	Ea	2
6510-200-2200	Bandage, Elastic, 3 inch	Ea	4
6510-200-3075	Compress, Gauze, 2 inch	Pkg	2
6510-200-3080	Compress, Gauze, 4 inch	Pkg	2
6510-200-4000	Bandage, Gauze, Roller, 2 inch	Rl	2
6510-200-5000	Bandage, Gauze, Roller, 3 inch	Rl	2
6510-201-1755	Bandage, Muslin, (Triangular)	Ea	2
6510-201-7425	Dressing, First Aid, Field (Large)	Ea	2
6510-201-7430	Dressing, First Aid, (Medium)	Ea	2
6510-201-7435	Dressing, First Aid, (Small)	Ea	2
6510-202-0750	Gauze, Petrolatum Impregnated	Pkg	4
6510-203-5000	Plaster, Adhesive, 3 inch	Rl	1
6510-203-8448	Pad, Gauze, 4 by 4s (10 4 by 4s put up in packs and sterilized)	Pkg	4
6510-597-7469	Bandaids (24 to pkg)	Pkg	1
6515-303-8250	Applicators, Cotton tipped	Pkg	1
6515-324-5500	Depressor, Tongue (8 to pack)	Pkg	1
6515-383-0550	Tourniquet, Web	Ea	2
6515-660-0046	Airway, Pharyngeal, Plastic, adult-child., (for mouth-to-mouth breathing)	Ea	1
6515-663-1550	Cannula, Tracheotomy, size 4	Ea	1
6515-663-1561	Cannula, Tracheotomy, size 6	Ea	1
6515-363-8840	Scissors, Bandage, Angular, Lister 7-1/4"	Ea	1
6545-920-4750	First Aid Kit, Eye Dressing	Pkg	1
6545-927-4960	Surgical Instrument Set, Individual	Set	1
5335-373-2800	Splint, Wire Mesh	Ea	2

The fully equipped Bizeau First-Aid Roll may be made of canvas or other suitable heavy material as shown in the photograph below:



—Official United States Navy Photograph

The Intriguing Electrical Burn

Review of Thirty-One Electrical Burn Cases

CAPT Philip H. Taylor MC USA, CAPT Louis Q. Pugsley MC USA, and COL Edward H. Vogel Jr MC USA,* U.S. Army Surgical Research Unit, Brooke Army Medical Center, Fort Sam Houston, Texas. J Trauma** 2: 309-326, July 1962.

Despite vigorous safety campaigns advocating the proper use of and regard for electricity today, electrical injuries still occur. The morbidity remains great and the mortality high. A review of electrical burn cases managed during the past 10 years at the U.S. Army Surgical Research Unit, Fort Sam Houston, revealed many interesting and unusual sequelae. The purpose of this article is to report pertinent findings in these electrical burn cases and to emphasize the more uncommon local and systemic sequelae.

Thirty-one electrical burn cases have been managed at the Surgical Research Unit, 1950 to 1960. Thirty burns occurred in males, ages 8 to 55 years, when accidental contact was made with high tension wires. Lightning stroke occurred in one female, age 43 years. Interestingly enough one patient had suffered an electrical burn 10 years previously.

In 7 cases, contact with high tension wires occurred during installation of television antennas. Strange as it may seem, this was the most common accident. With the ever increasing use of television, the frequency of this accident should be stressed and the public warned of the hazard.

The second most common origin was contact with high tension wires by linemen while working on utility poles. Three men working around or driving tall cranes were injured as the crane swung into high tension wires. During parachute jumps, two soldiers received burns by accidentally landing on high tension wires. Several uncommon occurrences were noted. One soldier received a fatal injury when the radio antenna of his jeep touched a high tension wire. Flying a model airplane which was hand controlled by a long wire was fatal to one patient when the airplane struck a high tension wire.

Nine cases were admitted after the tenth postburn day. The remaining 22 cases were followed throughout their course. In the latter group, 8 deaths were recorded.

The local manifestations encountered in this series of cases once again indicated the destructive force of an electrical injury. Entrance and exit points in most cases were sites of charring burns, with vessel thrombosis and marked peripheral tissue necrosis. Of the systemic sequelae, the gastrointestinal and renal proved to be the most interesting. Two of 5 cases with positive gastrointestinal symptoms and signs had intra-abdominal lesions at autopsy. Also, in

* Presently Chief of Surgery, U.S. Army Hospital, Okinawa, Ryukyu Islands.
(Read before the Twenty-First Annual Session of the American Association for the Surgery of Trauma, Chicago, Ill., September 28 - 30, 1961)
**Sponsored by American Association for the Surgery of Trauma.

addition to these 2 cases, 5 other cases of intra-abdominal lesions following electrical burns have been reported in the literature. Awareness of the possibility of intra-abdominal lesions should allow for earlier diagnosis and better management in the future.

Renal complications were common, but some were only transient. Acute Tubular necrosis documented at autopsy was a major contributing factor in the death of a high percentage of cases. Although suspected by other authors, this diagnosis has not previously been substantiated by autopsy findings. Possibly, early and adequate resuscitation is the most important key to the prevention of this entity.

Over all, this series demonstrated that patients with electrical burn injuries present difficult problems and warrant a guarded prognosis.

NOTE: The awesome destruction of body tissues by electric burns is vividly presented in 19 photographs in the 14 figures of this article. No reader can fail to think of the ever-lurking danger of electric currents which are always in close proximity in our homes, offices, hospitals, dispensaries, shipyards, air stations, and in all ships of the U.S. Navy. One careless or thoughtless act may spell disaster when least suspected. Failure to operate a preventive maintenance program for electric wiring, motors, utilities, connections and switches, proper grounding and insulation, may be the cause of fatal electric burns. Reference is here made to the article "Electric Shock, A Much Misunderstood Hazard," by Paul A. Reyff, Bureau of Labor Standards, Safety Standards X: 11-15, July - August 1961, which was reproduced in the U.S. Medical News Letter, Vol. 39, pp 32-37, 5 January 1962.

Electric shock and burns are only part of the problem when one recalls the high incidence of fires generated by faulty electric circuits, wiring, insulation, overloading, grounding, and the like. —Editor

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Polyneuronopathy

Carl J. Munch-Petersen MD, *and Edith Reske-Nielsen MD.* J Nerv Ment Dis 134: 463-469, May 1962.

In 1916, Guillain and Barre described a variant of the classic clinical picture of polyneuritis. At about the same time, Neel described the same clinical picture and was the first to demonstrate its neurohistologic basis. This disease, which was termed polyradiculitis, differed from common polyneuritis on various points: it ran a more rapid course, it was preceded by frequent attacks of upper respiratory infection, and, in particular, a great excess of protein in the spinal fluid was a conspicuous feature early in the disease. Moreover, the disease was assumed to be benign. In the course of time it appeared, however, that the prognosis was not always so favorable as originally assumed, and that several features which had passed unrecognized in the first cases on record

were added to the clinical picture. Cases have thus been observed in which the pronounced increase in spinal fluid protein was absent, although this had previously been regarded as pathognomonic of the disease. In addition, reports are available on cases which did not exhibit the entire complex of symptoms and are, therefore, considered to be abortive forms. Finally, polyradiculitis-like cases with a highly protracted and steadily progressive course have been described.

The etiology of the disease is unknown. Virus infections and an allergic reaction have been considered to be the most likely causes. In a few cases, the characteristic clinical picture developed after poisoning by triorthocresyl phosphate, carbon monoxide, or methyl chloride.

The authors report a case of polyneuritis of the Guillain-Barre type with a typically acute course. The patient was a man of 30 who had previously been in good health. Seven days before admission, paresthesiae in the legs and arms, flaccid paralysis of all extremities, and facial palsy developed. The condition remained stationary for 4 to 5 days, but was then aggravated. Paralysis of several cranial nerves occurred and the patient died in respiratory paralysis 19 days after admission.

Autopsy and subsequent histologic examination of the organs showed bronchopneumonia, partial atelectasis, tracheobronchitis, and congestion of the organs, but no evidence of mononucleosis.

Special interest attaches to the case because it was possible to remove the entire central nervous system with spinal ganglia, peripheral nerves, and muscles. Histologic studies revealed pathologic changes in the entire peripheral neuron, both in the sensory and motor divisions. There were edema, congestion, proliferation of the vascular endothelium, enormous proliferation of the Schwann cells which showed intense phagocytosis, and complete or partial degeneration of both myelin sheaths and axons. The ganglion cells, both in the spinal ganglia and the spinal cord, showed variable degrees of degeneration.

All cranial nerves, with the exception of the acoustic nerve, showed total degeneration of the myelin sheaths with a sharp demarcation between the completely degenerated peripheral parts and the partially degenerated, but preserved, central parts of the nerve roots. It was speculated whether this demarcation corresponded to the junction between the central glial and the peripheral parts of the nerve root. Degenerative changes of the nuclei of the cranial nerves, accompanied by slight gliosis, were observed.

As the entire neuron was primarily affected the authors believe that, in view of the localization of the pathologic changes, it is justified to describe the disease under the name of polyneuronopathy.

* Dept of Neurology and the Neuropathological Laboratory, Aarhus Kommunehospital, University of Aarhus, Denmark.

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The Seat Belt Syndrome *

John W. Garrett and Paul W. Braunstein MD. J Trauma 2:220-238, May 1962.

During the past few years, automobile seat belts have received wider public acceptance than ever before. A nationwide educational campaign has been sponsored jointly by the American Medical Association, the U.S. Department of Health, Education, and Welfare, National Safety Council, Fort Wayne Seat Belt Program, and the study of seat belt effectiveness by the Automotive Crash Injury Research Group of Cornell University. It is not known whether acceptance by the public is due to the work of these organizations or whether it reflects a growing public awareness of the fact that certain preventive measures can be taken to protect car occupants in case of accident.

Whatever the reason, the public is becoming more receptive; seat belts are better publicized and more readily obtainable and, as a result, an increasing number of belts are being installed in automobiles. It is probable that the presence of seat belt attachment points in the 1962 models of American automobiles and the continuation of educational programs will further accelerate this trend.

It should be noted that the acceptance of seat belts by those professionally concerned with automotive safety—physicians, automotive engineers, traffic engineers, and police groups—is not new. Members of these groups have long recognized the value of the seat belts, and many have used them for years. A recent survey conducted among its members by the American Medical Association, for example, revealed that 33% of physicians queried used seat belts.

While it is acknowledged that seat belts play an important role in protecting car occupants, some concern has been expressed over the possibility that the introduction of belts might increase the frequency or severity of certain injuries, particularly those in the abdominal region. It is well known that in any prophylactic or therapeutic regimen, the introduction of a new variable usually leads to modification of a clinical picture. Just as the use of penicillin has led to numerous examples of penicillin allergy or anaphylactic reactions, so in the use of seat belts, many physicians and investigators feared that the belt itself might contribute to many untoward situations and injuries. In brief, it was suspected that a "seat belt syndrome" might appear.

The meager data available in the literature, particularly with reference to the injury effects of belts in automobile accidents, indicated the need for further study in order to determine the relationship between seat belts and abdominal or other lower torso injuries. Additional data concerning the nature and severity of the injuries observed also appeared to be needed. In an effort to provide this information and to determine whether such factors as accident conditions, belt failure, or occupant physical characteristics are associated

* Read before the Twenty-first Annual Session of the American Association for the Surgery of Trauma, Chicago, Ill., September 28 - 30, 1961)

with seat belt injuries, the present study was undertaken. The seat belt data available for study consisted of 2778 accident-involved automobiles in which at least one occupant was wearing a seat belt. These cars contained 3673 occupants; 3325 wore belts and 348 did not. There were 844 injury-producing cases among the total, and in these cars there were 1100 belt users and 181 non-belt users. Injury was sustained by 944 belt users.

A total of 150 occupants received some injury to the lower torso; 26 of these injuries were regarded as serious. No fatal lower torso injuries were found except in one case, but the injury was not related to seat belt use; both car and occupant were completely crushed in a collision with a bus. The frequency of lower torso injuries among injured seat belt users was essentially similar to that observed among occupants in injury-producing accidents without belts (about 15% for both).

In the majority of the 26 cases where serious lower torso injuries occurred, accident circumstances were rather severe. Only 7 of these paitnets showed evidence of severe seat belt application, such as bruises and contusions. A summary of the principal injury findings follows:

1. Intra-abdominal injuries were observed in 7 cases.
2. Pelvic fractures were sustained by 7 occupants.
3. Injuries to the lumbar spine were somewhat more frequent (12 cases). These injuries generally appeared either in high speed accidents with some vertical component of force known to produce compression fractures, or in high speed accidents with sudden violent changes of direction often combined with multiple impacts.
4. Sprains or strains of muscles in the lumbar region were observed in 47 cases. In 41 of these, the seat belt car was struck from behind; in no case was the snubbing action of the belt evidenced by bruises or contusions to the abdomen.
5. Contusions or soreness in the abdominal region or over the bony protuberances of the hips were found in 77 cases without any accompanying injury to internal organs or skeletal structure.

Only 29 instances of belt failure—less than 1%—were found among 3325 belt users. Examination of belt failures revealed that in only one case did an occupant sustain an intra-abdominal injury. Belt failure, like lower torso injury, was usually associated with high speed, severe accidents. The ability of the human being to resist forces exerted on the lower torso without serious injury exceeded the resistance of the belt to damage in 28 of the 29 cases observed.

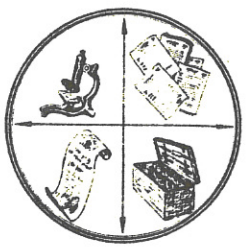
It is concluded from the data examined in this report that under conditions of low severity, where the vast majority of all accidents occur, the seat belt presents no hazard to occupants except possibly in unusual and isolated instances. Under more severe accident conditions, the localization of force in the pelvic area and the snubbing action of the seat belt may produce injury, but these injuries are as likely to be associated with such factors as type of accident, speed, or sudden and violent changes of direction as they are with the seat belt itself.

Certain accident situations, notably compartment impacts when an occupant is seated at the site of impact, are inherently dangerous and were not improved by the use of belts. These, however, are but a small proportion of all injury-producing accidents. When the impact was on the opposite side of the car, or on front or rear fenders on the same side as the occupant, injury was considerably reduced.

In this study it was found that the human body is capable of resisting the maximum forces exerted on the lower torso by the types of lap belts used by the occupants. Seat belts, by their snubbing or restraining action, appear to contribute to modification of injury patterns. Only in the most severe crash conditions are serious injuries likely to be associated with seat belt application. Even under these conditions, however, evidence derived from an earlier ACIR study indicates that automobile occupants are better off with a seat belt than without one.

NOTE: It is to be hoped that future design characteristics of automobile seatbacks will prove protective against whiplash injury of the neck caused by rear end collisions. It is conceivable that the future will see developments in body and head harness in addition to the standard seat belt as it is known today. Also another consideration could well be the development of high seatbacks for car occupants which face to the rear of the vehicle.

It is pertinent to emphasize that there is very little to be expected in the way or protection for persons involved in high-speed crashes.—Editor



MISCELLANY

U. S. Navy Medical Service Corps - Anniversary Messages

"On this 15th Anniversary of the Medical Service Corps of the U. S. Navy, I extend greetings and congratulations to all members of this important component of the Navy Medical Department. Although one of the younger Corps in our Navy team, your group has risen to every challenge involved in the scientific and management aspects of a world-wide medical effort. I am confident that you will continue to face the future with a determination to discharge these responsibilities in full measure everywhere and always.

To each and every member of the Medical Service Corps— "HAPPY BIRTHDAY."

s/ FRED KORTH
Secretary of the Navy

"It is with great pleasure that I extend to all of you hearty congratulations on the 15th birthday of the Medical Service Corps and I assure you that all members of the Medical Department join me in these felicitations.

Your record of achievement over the span of years since the founding of the Corps fully justifies your pride in it. The men and women who wear your emblem have become well known for their abilities, devotion to duty, and spirit of service without which our efforts to accomplish our mission would be sorely hampered.

Since the prevention of disease and injury and the care of the sick demand and merit the finest capabilities that can be brought to bear, you may well feel intense gratification that your varied skills have been and are a vital part of those functions.

Wherever you are serving, you know that you have our best wishes and the secure knowledge that future anniversaries will find the Medical Service Corps ever adding to the stature of its reputation.

HAPPY BIRTHDAY."

s/ E. C. KENNEY
Rear Admiral MC USN
Surgeon General

USN Medical Service Corps
A Progress Report

The anniversary, on 4 August 1962, marks another milestone in the short but lustrous history of the Medical Service Corps of the U. S. Navy, the Corps having been created by Act of Congress fifteen years prior to that date. At its inception the Medical Service Corps included officers qualified in supply and administration, pharmacy, optometry, and certain sciences allied to medicine.

In 1952, the Women's Specialists Section, composed of dietitians, physical therapists, and occupational therapists was added and, in 1953, the Podiatry Section was established. In 1954, Congress gave recognition to the expanding size and ever-increasing responsibilities

of the Corps by enacting legislation establishing the position of Chief of the Medical Service Corps.

The Medical Service Corps has now grown to a strength of more than 1300 officers who serve ashore and afloat throughout the world—from London to Tokyo and from Alaska to Viet-Nam. In expeditionary units and deployed ships, in laboratories and schools, in headquarters and stations, in hospitals and clinics, these men and women are an integral part of our Nation's first line of defense.

The Corps is composed of officers with diverse talents with a common goal in the fulfillment of the great mission of the Navy Medical Department. Medical Service Corps officers are engaged in a vast program of self improvement through education, training, and meaningful experience and they face the future with determination and confidence in their ability to meet in full measure the challenges and the responsibilities which arise in this nuclear and space age.

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Applications for Residency Training 1963 - 1964

Interested applicants for residency training, both inservice and outservice, should carefully review BUMEDINST 1520. 10B for information concerning programs offered and procedure for submitting applications.

Training in Civilian Institutions

Deadline for submission of applications for training in civilian institutions to begin 1 July 1963 or early Fall for academic programs is 15 August 1962. Requests for the following types of training programs will be considered by the Professional Advisory Board at its meeting in early September.

1. Thoracic Surgery - Certification by American Board of Surgery required.

2. Plastic Surgery - Completion of 4 years of General Surgery required by Bureau of Medicine and Surgery.

3. Public Health - leads to Masters degree in Public Health and certification by American Board of Preventive Medicine in Public Health.

4. Occupational Medicine - leads to Masters degree in Public Health (in Industrial Health) and certification by the American Board of Preventive Medicine in Occupational Medicine.

5. Aviation Medicine - leads to Masters degree in Public Health and certification by American Board of Preventive Medicine in Aviation Medicine.

6. Neurology - 3-year program in civilian institution.

7. Radiobiology - academic year at the University of Rochester preceded by 12-week academic refresher course (summer session), followed by field trips to reactor sites.

8. Subspecialties of Internal Medicine (Allergy, Gastroenterology, Hematology, and Pulmonary Diseases) - completion of 3 years of formal training in Internal Medicine required by Bureau of Medicine and Surgery.

Applications for Neurosurgery will be considered by the Inservice Professional Advisory Board meeting in November 1962, as the required training in General Surgery (6 months to 1 year) is spent in a naval hospital prior to the civilian training. Those selected will begin the inservice phase during 1963-64 and the civilian phase during 1964-65.

Officers may indicate three choices of civilian institutions in order of preference where they desire the training or may request training in a civilian institution to be determined later. However, the Bureau of Medicine and Surgery will make final arrangements for enrollment after approval of the request has been obtained.

Applicants may contact institutions relative to training, but in any correspondence or interviews it should be made clear that acceptance will be contingent upon approval being obtained from the Bureau of Medicine and Surgery.

Only a limited number of individuals will be sponsored in these programs in view of the existent personnel shortage.

Inservice Residency Training

Deadline for submission for inservice training programs to begin in the summer of 1963 is 15 November 1962. Candidates will be notified of selection or non-selection by 15 December 1962. Applications, submitted via chain of command, should be for the full training program as outlined in BUMEDINST 1520.10B.

Combined programs, such as in Neurosurgery, should be requested for the inservice portion first to begin in the summer of 1963, with the civilian portion to follow in a civilian institution to be determined.

Applicants are encouraged to list at least three choices of naval hospitals for location of training if such choices exist in the chosen specialty, and may feel free to write the chiefs of the services for details of the training offered, if desired.

Early submission of applications is recommended to assure processing through chain of command and receipt in BuMed prior to the 15 November 1962 deadline. —Training Branch, Professional Division, BuMed.

NOTE: These programs are published for the second time because of their great importance to the career development of medical officers and future patient care. —Editor

Warning Concerning Topical Use of Ophthalmic Steroids

The Bureau of Medicine and Surgery continues to receive reports of the use of ophthalmic topical steroids without proper indication. Not infrequently, a patient with a corneal ulcer due to herpes simplex virus (dendritic ulcer) presents himself at sick call with what appears to be a conjunctivitis. If topical steroids are employed, the conjunctival injection will decrease and the patient may show marked improvement symptomatically while the virus spreads rapidly and the ulcer erodes deeper in the cornea. Such ulcers have been known to erode through the cornea, and eyes have been lost as a result of this type of treatment. At the very least, valuable time is lost and scarring of the cornea is increased when steroids are utilized in these cases.

When used for specific indications, such as allergic conjunctivitis, follicular-conjunctivitis, blepharo-conjunctivitis, and acute non-granulomatous iritis, topical steroids are usually very effective. However, since positive differential diagnosis of the inflamed eye requires both specialized training and proper diagnostic equipment, it is recommended that the use of topical steroids be left to the ophthalmologist and that any patient with an inflamed eye that does not respond promptly to the usual treatment of antibiotics and warm compresses be referred to him for emergency consultation.

—Submitted by CAPT Sidney D. Bond Jr, MC USN, Head of Training Branch, Professional Div, BuMed.

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Chemical, Biological, and Radiological Weapons Orientation Course

Twenty-five classes in the Chemical, Biological, and Radiological Weapons Orientation Course will be conducted at the U. S. Army Chemical Corps Proving Ground, Dugway Proving Ground, Dugway, Utah, by the Department of the Army during the Fall 1962, Winter and Spring 1963. The duration of the course is three and one-half days.

Officers of Commander through Flag rank are eligible to attend. Civilians in the grade of GS-13 or higher must be in a key position where need-to-know is mandatory. Persons who have received complete CBR briefings during the past year should consider delaying their attendance. TOP SECRET security clearance is required. Limited quotas will be provided the Bureau of Medicine and Surgery by the Chief of Naval Personnel on a "first come first served" basis.

The course provides a high level orientation on Chemical, Biological Warfare, and Radiological Implications of Nuclear Warfare, and is designed to acquaint senior military and civilian personnel of the Armed Forces with United States doctrine, policy, technics, and capabilities in CBR Warfare.

The scope of this course relates to national policy concerning CBR Warfare; United States present and potential capabilities for waging CBR

Warfare, foreign capabilities; concepts, technics, target analysis, systems of employment, integrated weapons systems, operational applications, comparative logistics, strategic appraisal, joint aspects, convert activities, and future developments in Chemical and Biological Warfare; live firing demonstrations employing chemical agents against typical tactical target; staff responsibilities in radiological fallout prediction, monitoring, survey, and radiological recovery; student-faculty panel.

Requests should be forwarded in accordance with BUMED INSTRUCTION 1520.8. Courses are scheduled for September, October, November, and December 1962, and March, April, May, and June 1963. Requests must be received in the Bureau of Medicine and Surgery by the following dates:

Months of Courses		Deadline for Request to reach BuMed	
October	1962	6 August	1962
November	1962	10 September	1962
December	1962	15 October	1962
March	1963	7 January	1963
April	1963	4 February	1963
May	1963	11 March	1963
June	1963	8 April	1963

—Training Branch, Professional Div, BuMed

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Announcement of Aerospace Medical Courses

Course	Class	Inclusive Dates	Deadline Date to Apply	Quota
Medical Support of Missile Operations	62-C	24 Sep - 5 Oct 1962	10 Sep 1962	3
	62-D	26 Nov - 7 Dec 1962	29 Oct 1962	3
	63-A	4 Mar - 15 Mar 1963	4 Feb 1963	2
	63-B	6 May - 17 May 1963	8 Apr 1963	2
Medical Support for Space Flight	62-B	15 Oct 9 Nov 1962	17 Sep 1962	3
	63-A	1 Apr 26 Apr 1963	4 Mar 1963	3

The above scheduled courses will be conducted by the U.S. Air Force Medical Service at the School of Aerospace Medicine, Brooks Air Force Base, Texas.

SECRET security clearance is required on all candidates approved for attendance.

The presentation of Medical Support of Missile Operations is designed to provide selected officers of the Medical Services of the Armed Forces of the

United States with essential fundamental knowledge for the organization and implementation of a medical support program at a missile site. Instruction is presented to familiarize the graduate with operational weapons systems and with the various toxic substances and hazardous conditions associated with missile operations.

The purpose of the course, Medical Support for Space Flight, is to familiarize selected physicians of the Department of the Army, Navy, and Air Force with the physical and chemical aspects of the upper atmosphere and space and the biomedical impact of these factors on man, and to permit active participation in medical support of future man-in-space programs. Prerequisites include: (1) Must be a Regular or Career Reserve Medical Officer; (2) Must have satisfactorily completed the Primary Course in Aerospace Medicine as conducted by the U.S. Air Force, or the Basic Course for Flight Surgeons as conducted by the U.S. Navy; (3) Must be actively engaged in the teaching or practice of aviation medicine or conducting aeromedical research.

Requests should be forwarded in accordance with BUMED INSTRUCTION 1520.8 and comply with the deadline date as indicated above. All requests must indicate that a security clearance of SECRET has been granted to the officer requesting attendance.—Training Branch, Professional Div, BuMed

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Important Notice for MSC Officers. The attention of all Medical Service Corps officers is invited to the provisions of BuMed Instructions 1500.7 and 1520.12A. Officers who have completed courses and who have not forwarded transcripts in accordance with these instructions are requested to provide this information to insure its availability in official records. (MSC Division, BuMed)

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BUMED INSTRUCTION 1500.4C 13 July 1962

From: Chief, Bureau of Medicine and Surgery
To: Ships and Stations Having Medical Corps/Dental Corps/Medical Service Corps/Nurse Corps Personnel

Subj: Memberships in civilian professional societies and Specialty Board examinations; procedures for obtaining

This instruction informs Medical Department officers of the requirements for furnishing the Bureau of Medicine and Surgery information relative to obtaining membership in civilian professional societies and the procedure to be followed in obtaining authorization to participate in American Specialty Board examinations.

BUMEDINST 1500.4B (NOTAL) is hereby superseded and canceled.

Medical Aid to Honduras

At the request of the Chief of Naval Operations, the Bureau of Medicine and Surgery provided a preventive medicine and emergency medical care team for the Government of Honduras in connection with an epidemic of gastroenteritis at San Pedro Sula. Over 1000 school children were involved. The disease had caused 65 deaths and threatened to spread.

Naval Medical personnel from U.S. Navy Preventive Medicine Unit No. 2, Norfolk, Va., and from the U.S. Naval Hospital and Naval Medical Research Institute, National Naval Medical Center, Bethesda, Md., arrived in Honduras on 6 June 1962 with eight tons of supplies and equipment. The outbreak was found to be largely due to gross contamination of the water supply. Pathogenic organisms, including Shigella and Salmonella species, were isolated from specimens obtained among the patients affected. The Navy medical team requested, and promptly received, additional supplies for diagnostic studies and treatment. Fifteen hundred pounds of HTH (calcium hypochlorite) was supplied for use in water purification.

The preventive medicine component of the team surveyed the water supply and sewage disposal system, and recommended corrective measures to the local authorities. The medical care component of the team was primarily responsible for a rehydration clinic where approximately 500 patients were given intravenous fluids on an outpatient basis. At the same time, the team's Pediatrician saw approximately 1500 less severely ill patients in his clinic. Upon departure, the team left nearly five tons of antibiotics, intravenous fluids, and miscellaneous supplies for local physicians to use in treating additional cases.

By 16 June, 7 cases of meningitis had been confirmed. It was feared that a serious epidemic impended, and an immediate shipment of 500,000 sulfadiazine tablets and 1000 vials of intravenous sulfadiazine was made from Andrews Air Force Base to combat this danger. As of 19 June, the incidence of gastroenteritis was decreasing and the feared meningitis epidemic had not developed.

The Chief of Naval Operations issued a commendation to all members of the Naval Medical Team for their prompt and effective action in halting a dangerous epidemic. (PrevMedDiv, BuMed)

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Summer Driving - Great Lakes, Ill., NAVNEWS. Contrary to expectations the winter months—in spite of lowered visibility and slippery pavements—are not the worst months for accidents to off-duty military personnel. Records reveal that fatalities and injuries to military personnel increase as driving conditions improve and stay at that higher level through fall and early winter.

This may be because dry pavements cause a false sense of security and taking extra chances. Perhaps greater distances are logged on leave and liberty travel when the weather is nice. Or maybe, there are not the constant reminders about good driving we hear in the winter. Death doesn't take a holiday just because we do.

From the Note Book

U.S. Naval Internships. One hundred and seventy-four graduates from medical schools throughout the United States began their one-year rotating internships at thirteen U.S. Naval Hospitals on 1 July 1962. Two other graduates will begin at a later date—one in October 1962 and one in January 1963—which will bring the total number of interns for fiscal year 1963 to 176. The medical school graduates are commissioned Lieutenants in the Medical Corps of the U.S. Navy prior to beginning their internships. The number of interns assigned to each of the thirteen hospitals follows: Bethesda, Md., 17; Charleston, S. C., 8; Chelsea, Mass., 12; Great Lakes, Ill., 12; Jacksonville, Fla., 8; Newport, R. I., 6; Oakland, Calif., 17; Camp Pendleton, Calif., 10; Pensacola, Fla., 6; Philadelphia, Penna., 18; Portsmouth, Va., 21; St. Albans, N. Y., 17; San Diego, Calif., 24.

(TIO, BuMed News, 11 July 1962)

Assignment for CDR Moeller. Effective 1 June 1962, CDR Ruth Moeller MSC USN assumed additional duty as Assistant for Women's Specialists Section Officers in the Medical Service Corps, vice LCDR Elizabeth O'Malley MSC USN. CDR Moeller is a physical therapist and is at present on the staff of the U.S. Naval Medical School, National Naval Medical Center, Bethesda, Md.

SECNAV Award to Doctor Alpen of USN RDL. Dr. Edward L. Alpen, Commander in the Medical Service Corps, U.S. Naval Reserve, 1743 Lexington Ave., San Mateo, Calif., received the Secretary of the Navy's $5000 Award for Distinguished Achievement in Science on 27 June 1962. This is the second time this Award has been granted. Dr. Alpen heads the Biological and Medical Sciences Division of the U.S. Naval Radiological Defense Laboratory in San Francisco where the Award ceremony was held.

RADM C.A. Curtze USN, Commander of the San Francisco Naval Shipyard, made the presentation for the Chief of the Bureau of Ships on behalf of the Secretary of the Navy. The citation reads in part: "Dr. Alpen has brought to bear a wide knowledge of ionizing and other radiations. He has represented bioscience with distinction in many places here and abroad. By his exhaustive studies of energy dependence of biological effects and clarification of mixed radiations and their effectiveness, and the culmination of a new doctrine for radiological hazard evaluation he has accomplished scientific achievements of extraordinary importance, of value to the Nation and to the world."

Appointment for CAPT Vasa. The American Optometric Association has appointed CAPT Ralph L. Vasa MSC USN to serve as Chairman of the Committee on Military Optometry for the AOA in 1962 - 1963. He has been a member of this committee for several years and is well acquainted with its scope and function. CAPT Vasa is Head of the Optometry Division of the U.S. Naval Medical School, NNMC, Bethesda, Md., where he is active in the teaching programs of the Optical (General) and Optical Laboratory Technique courses for qualified Hospital Corps members. In the Bureau of Medicine and Surgery,

CAPT Vasa serves additional duty as Head of the Optometry Section of the Surgery Branch, Professional Division. He is also Assistant for Optometry Officers in the office of the Director of the Medical Service Corps Division, CAPT Leo J. Elsasser MSC USN.

Honor for LCDR Gruber. The Legion of Valor of the United States of America, composed of members of the Armed Forces of the United States who have received the Congressional Medal of Honor, the Distinguished Service Cross, or the Navy Cross in combat, held an annual meeting at USNH Philadelphia in early July. At this meeting, a member of the Navy Nurse Corps Reserve, LCDR Veronica C. Gruber NC USNR, was selected by the members of the Legional of Honor as outstanding in professional qualifications and devotion to duty. LCDR Gruber is a staff nurse at USNH Philadelphia. She will attend the 1962 Reunion of the Legion held under the sponsorship of the Commanding General, Continental Army Command, Fort Monroe, Va., 11 - 18 August. During Reunion proceedings, LCDR Gruber will receive recognition from the Legion of Valor for her outstanding record as a Navy Nurse. (PIO, USNH Phila, Penna.)

Promotion and Reassignment for CAPT Monahan. In a recent ceremony at USNH Yokosuka, Japan, the Commanding Officer, CAPT William N. New MC USN, presented a letter from the Secretary of the Navy to CAPT Dorothy P. Monahan NC USN, promoting her to her present rank effective 1 May 1962. She is one of four captains on active duty in the Navy Nurse Corps.

CAPT Monahan served as Chief, Nursing Service, USNH Yokosuka, from March 1961 until detached on 28 June 1962 to report to the Nursing Division, Bureau of Medicine and Surgery, Washington, D. C. where she will serve as Deputy Director. She has been Chief of Nursing Service in naval hospitals San Juan, Puerto Rico; Guam, Marianas Islands; and Oakland, California. She is a member of the American Nurses Association. —From CNFJ-PIO

NC Officers Serve Senior Girl Scout Roundup. LTJG Frances E. Wagenseller NC USNR and ENS Lynne R. Elwinger NC USNR, USNH Bethesda, Md., were authorized leave from nursing duties during the last 2 weeks in July to serve as camp nurses for the Third National Senior Girl Scout Roundup at Button Bay State Park on the shores of historic Lake Champlain. Almost 8500 girls and 1500 adults, representing the United States and many other nations, shared in the Roundup. As camp nurses, LTJG Wagenseller and ENS Elwinger were each responsible for the health and safety of approximately 350 scouts and 20 adult staff members.

Naval Medical Research Reports

U.S. Naval Medical Research Institute, NNMC, Bethesda, Md.

1. Evaluation of Some Laboratory Procedures in Diagnosing Infections with Schistosoma mansoni MR 005.09-1033.01 Report No. 2, July 1961.

2. Filarial Etiology of Tropical Hydroceles in Puerto Rico MR 005.09-1033.01 Report No. 3, March 1961.
3. Respiration of a Rickettsia-like Microorganism, Wolbachia Persica MR 005.09-1200.02 Report No. 9, March 1962.
4. Investigation of the Stability of the Trachoma Agent MR 005.09-1200.03 Report No. 5, March 1962.
5. Drug Susceptibilities of the Psittacosis and Trachoma Agents MR 005.09-1200.03 Report No. 4, March 1962.
6. Some Sociological Considerations in Planning Foreign Medical Assistance Programs MR 005.12-1100.02 Report No. 12, April 1962.
7. Status of Plasma Expanders in Open Heart Surgery MR 005.12-0002.04 Report No. 8, May 1962.
8. The Free Amino Acids of the Ageing Female Aedes Aegypti Mosquito MR 005.09-1401.01 Report No. 7, June 1962.
9. Nature of the Contractile Mechanism in Muscle MR 005.08-0020.01 Report No. 6, July 1962.

U.S. Naval Medical Field Research Laboratory, Camp Lejeune, N.C.

1. User Test of Carrier and Support Equipment, Medical Gas Cylinder MR 005.12-6001.6, March 1962.
2. User Test of Litter-Bed Combination, Folding Type MR 005.12-6001.6, April 1962.
3. Comparison of Various Fluid Regimens in the Treatment of Burn Shock in Dogs MR 005.12-7020.1.2, May 1962.
4. Left Ventricular Function, Total Vascular Resistance and Coronary Blood Flow after Administration of Postburn Blood and Lymph MR 005.12-7020.1.3, May 1962.

U.S. Naval Air Development Center, Aviation Medical Acceleration Laboratory, Johnsville, Penna.

1. Effect of Hypothermia on the Rat's Tolerance to High Positive Acceleration with Evidence for the Existence of Different Acceleration Syndromes at High and Low G MR 005.13-0002.15 Report No. 3, May 1962.
2. Inhibition of Mitochondrial ATP-ase and ATP_iP Exchange Activity with Tofranil MR 005.13-0002.7 Report No. 17, June 1962.

U.S. Naval School of Aviation Medicine, Aviation Medical Center, Pensacola, Fla.

1. Problems of Nitrogen-Free and Carbon Dioxide-Rich Extraterrestrial Atmospheres MR 005.13-3100 Subtask 4 Report No. 3, July 1960.
2. Comparison of Autokinetic Movement perceived by Normal Persons and Deaf Subjects with Bilateral Labyrinthine Defects MR 005.13-6001 Subtask 1 Report No. 66, February 1962.
3. Time Profile of Tissue Ionization Dosages for Bailey's Synthetic Spectrum of a Typical Solar Flare Event MR 005.13-1002 Subtask 1 Report No. 22 April 1962.

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DENTAL SECTION

An Evaluation of a Chemical Vapor Pressure Sterilizer

LCdr E. C. Allen, DC, USN

Spores of Bacillus stearothermophilus on strips and in closed vials were subjected to effects of the Harvey Sterilizer directly, in surgical packs, in water, and in sealed envelopes for periods of 5 to 30 minutes. Temperature variations also were recorded for various conditions of the sterilization. A similar study was made using the same materials and methods in the autoclave, and the results were compared.

Heat-resistant spores on strips were destroyed upon direct exposure to vapors of Vapo-Steril Solution used in the Harvey Sterilizer. The time required to destroy them was equivalent to the time required to autoclave them.

Heat-resistant spores on strips wrapped within surgical packs or placed in sealed envelopes were not destroyed in 15 minutes, but were killed in 30 minutes. Even after 30 minutes, spores placed in water were not killed, indicating that water acts as a protective barrier for the spores, preventing their destruction by the Vapo-Steril Solution.

Spores kept in unwrapped sealed vials were destroyed in 15 minutes, but when wrapped in any fashion they were not killed after 30 minutes. When the vials were surrounded by surgical packs, the heat in the center of the packs was not sufficient to destroy the spores. Since the heat was found to vary from time to time and from one position to another within the sterilizer, sterilization in this unit, by heat alone, was not dependable.

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Evaluation of the Ultrasonic Cleaning Unit

Cdr E. R. Black, DC, USN and Cdr F. P. Beall, DC, USN

Experiments were performed to evaluate the ability of a table model ultrasonic unit to clean the different shapes and surface textures of instruments contaminated with substances encountered in dental practice. Four different cleaning solutions were used, and distilled water was used as a control. The time required for cleaning, as observed visually, was recorded. Color photographs

were taken to show the effectiveness of the cleaning. Further evaluations were made to determine the effect of the ultrasonic action on 24-hour cultures of Staphylococcus aureus and Escherichia coli using zephiran chloride as the test solution. The length of time required to completely destroy a culture, and the number of organisms destroyed after a specific time, was determined for each of the various strengths of zephiran chloride selected, as well as for sterile water.

The ultrasonic device tested was found to be effective in cleaning dental instruments, but no more effective than cleaning by simple mechanical means. There was no significant acceleration or enhancement of the disinfectant property of the zephiran chloride solutions on E. coli and Staphylococcus aureus when subjected to ultrasonic vibrations in the unit.

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The Effect of Mixing Products of Various Manufacturers on the Physical Properties of Silicate Cements

LCdr C. J. Schultz Jr., DC, USN and LCdr H. Muller III, DC, USN

Frequently it is necessary to combine the powders of silicate cement from 2 different manufacturers in order to obtain a satisfactory shade match. The purpose of this study was to investigate the general compatibility of the powders of 2 manufacturers when combined and then mixed with the liquid of either brand. Three different brands were subjected to tests for consistency, setting time, and crushing strength, both as pure materials and as 1:1 combinations with each of the others. The testing procedures and standards of American Dental Association Specification No. 9 were employed within the limits of available equipment. For crushing strength results, specimens produced from materials of each individual manufacturer were used as standards to which experimental specimens of combined materials were compared.

The results of the study indicated that when equal parts of 2 different brands of silicate powder are combined and the combination mixed with the liquid of either brand: (1) the powder-liquid ratios required to produce the proper consistency are within or closely approximate the manufacturers' recommendations; (2) the setting times are within the standards set by the American Dental Association specifications; and (3) the crushing strengths are comparable to those obtained with uncombined powders.

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NOTE: The above three articles represent abstracts of Research Reports of projects completed in partial fulfillment of requirements of the General Postgraduate Course, USNDS, NNMC, Bethesda, Md.

—Professional Branch, Dental Div., BuMed

Temporary Cement-Alloy Restorations

During a recent Recruit Training Dental Officers Conference, held in the Bureau of Medicine and Surgery, it was pointed out that many carious teeth were not restored for recruits prior to graduation. Many teeth were left unattended which might later require extraction. Further, it was emphasized that it was a common occurrence to restore 3 to 4 carious teeth with permanent type restorations, extract one or more others during dental availabilities but still leave 8 to 12 carious teeth untreated. These men were then assigned to service schools or the fleet and in many instances developed pulpal involvements requiring extractions and subsequent prosthetic replacement.

Over the past several months a research team conducted a pilot study testing a number of temporary filling materials to find one that would be acceptable and readily available as a temporary restoration. The one best suited contained one third zinc phosphate cement and two thirds alloy. Teeth prepared to receive this temporary cement have the caries removed and a liner placed. A notation is made in the patient's Dental Record (SF-603) indicating that this was a temporary cement and alloy restoration with all caries removed. In comparing statistics at the activity at which the study had been made for the same quarters of concurrent years, there was a 5% decrease of permanent amalgam restorations, but an increase of more than 80% of total teeth restored. Comments from dental officers encountering and replacing these temporary restorations with permanent ones are solicited in order that the technics may be better evaluated.

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Demonstration of an Aerosol Produced by the Air-Water Spray and Air-Turbine Handpiece

LCdr L. R. Pistocco, DC, USN and LCdr G. M. Bowers, DC, USN

Biologic contaminants, oils, dust, et cetera, may occur in the air as a cloud or spray, referred to as aerosols.

It was the purpose of this study to determine the extent of aerosols produced by the air-water coolant spray when used with the air-turbine handpiece.

A portable air-turbine handpiece with a self-contained water supply was used. Serratia marcescens, in dilutions of approximately 10^9/ ml, was used in the water supply of the unit so that the water-air spray contained the tracer organisms. A number 577 bur was used in the turbine handpiece. Sieve samplers were used to recover the organisms. To determine the area where the aerosol was most concentrated, and to detect how far the aerosol spread from the operated site, the samplers were placed in various positions and distances from the handpiece. Each test was run for 2-1/2 minutes.

The organism was recovered up to 6 feet from the handpiece. The highest concentration of organisms was within 18 inches from the handpiece, and

this distance was considered to be the normal working area of the dentist. The aerosol was not appreciably reduced by the oral evacuator.

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Personnel and Professional Notes

Fiftieth Anniversary, U. S. Naval Dental Corps. A number of dental officers may be in a travel or leave status at the time the various banquets and dinners are held commemorating the Fiftieth Anniversary of the U. S. Naval Dental Corps. These officers and their wives are urged to attend the local celebration in the area in which they may be visiting.

Dental Corps Anniversary Commemorative Items. Arrangements have been completed with the See-Line Company, 212 W. 10th Ave., Amarillo, Texas, to contact Navy and Marine Corps activities having dental personnel concerning the sale of Dental Corps anniversary souvenirs. Among the items available are pen sets, cigarette lighters, ash trays, and napkins. All articles bear the official 50th Anniversary Emblem. Dental officers who have not received advertising brochures and order forms may contact the See-Line Company direct.

Rear Admiral Schantz Attends Meeting. RAdm C. W. Schantz, DC, USN, Assistant Chief of the Bureau of Medicine and Surgery (Dentistry), and Chief, Dental Division, represented the U. S. Navy while attending the Federation Dentaire Internationale Meeting of 7-14 July 1962, at Cologne, Germany. At the meeting he presented an illustrated lecture on "Training of the Dental Officer in First Aid and Mass Casualty Care," utilizing "Mr. Disaster," the Navy Dental Corps developed whole body manikin. Before returning to Washington on 16 July, RAdm Schantz visited the Federal German Republic Naval Academy.

New Standardized Dental Items.

FSN	Nomenclature	Unit Issue	Unit Price
6520-817-2513	Matrix, Crown, Dental, Plastic, Central Medium 12's	Pkg	$1.10
6520-817-2514	Matrix, Crown, Dental, Plastic, Cuspid Large 12's	Pkg	$1.10

El Toro Dental Officers Host Meeting. Dental Officers attached to U. S. Marine Corps Air Station, El Toro (Santa Ana), California, were hosts to 280 members of the Orange County Dental Society when the Society held its Annual Scientific and Professional Meeting on 8 May 1962. The meeting was held at the Commissioned Officers' Mess (Open).

Capt R. D. Koepke, DC, USN is the Station Dental Officer.

Commander Stephenson Elected President of Dental Society. Cdr Thomas D. Stephenson, DC, USN, was recently inaugurated as President of the Panama Canal Zone Dental Society, a Constituent Society of the American Dental Association. Dr. Paul K. Musselman, Trustee of the American Dental Association for the 4th District, attended the meeting and presented a lecture entitled "Legislative and Social Problems Facing Dentistry." Cdr Stephenson is presently attached to the U. S. Naval Station, Rodman, Canal Zone.

Dr. Earl Pound Lectures at Naval Dental School. Dr. Earl Pound of Los Angeles, Calif., recently lectured on "Realistic Approach to Immediate and Full Denture Construction" to staff, resident, and postgraduate Dental officers, and civilian and military guests, at the U. S. Naval Dental School, Bethesda, Md.

Dr. Pound is a Diplomate of the American Board of Prosthodontics. He is past President of the Pacific Coast Society of Prosthodontics.

At present, Dr. Pound holds teaching posts at the University of Southern California, the University of California, and the University of Washington.

During World War II Dr. Pound spent three years with the Naval Dental Corps serving with the Department of Plastic Surgery at Oakland Naval Hospital.

He is a member of many professional societies, among which are the American Equilibration Society and the Academy for Plastics Research in Dentistry.

New York Artist on Navy Dental Corps Project. Mr. Cliff Young, New York portrait and mural painter, recently completed a trip through the Western United States and the Pacific collecting material for a series of portraits and murals depicting the mission of the U. S. Naval Dental Corps in this area. The Naval Dental Corps celebrates its 50th anniversary this year.

Mr. Young's trip was arranged by the Naval Art Cooperation and Liaison Committee of the Salmagundi Club, one of the oldest art groups in the United States, and the Chief of Naval Information, Washington, D. C.

He is a member of the National Society of Mural Painters, the Society of Illustrators, the Artists Guild, and the New York chapter of the American Artists Professional League.

Among his works were 2 murals at the Zenger Memorial Room, Federal Building, New York City and the ceiling decoration at the home of actress Katherine Cornell in New York.

One of his most recent works was a mural depicting the surrender of Santa Anna to Sam Houston. The mural was commissioned by former Navy Secretary John Connolly and is located in the wardroom of the submarine USS Sam Houston.

LCdr Hickey Appears as Essayist. LCdr Loren V. Hickey, DC, USN, attached to the U. S. Naval Training Center, Great Lakes, Ill., presented a discourse on the Naval Dental Corps Casualty Treatment Training Program before a Regional Civil Defense Conference held in Chicago, Ill., on 14 April 1962. The conference was sponsored by the Council on Federal Dental Services, ADA.

PREVENTIVE MEDICINE

A Comparison Between Aspirin and Antibiotics in the Treatment of Minor Respiratory Infections

P. K. Fraser, L. A. Hatch, and K. E. A. Hughes. The Lancet No. 7230, Vol. I, pp 614-616, 24 March 1962.

Previous studies on healthy young adults with acute respiratory disease in the Portsmouth Naval Command, Portsmouth, England, suggested that the incidence of infections was greatest in the first quarter of the year, and that influenza and adenovirus were likely etiological agents (Fraser et al., 1960). The authors undertook a double-blind trial using aspirin, phenoxymethylpenicillin and oxytetracycline to treat patients admitted to the hospital with acute upper respiratory illnesses, in an attempt to answer 2 questions. The first of these was whether or not antibiotics had any advantage over aspirin in altering the course of such virus infections as influenza or adenovirus. The second question was whether or not antibiotics administered indiscriminately would prevent the development of complications. Expectations were not fulfilled and the questions were not answered, for most of the illnesses were apparently from causes other than those for which tests were available. When the authors realized that these illnesses were indistinguishable from "colds," the findings were analyzed.

In a double-blind trial, 95 patients selected at random were admitted to the hospital with minor respiratory illnesses and were treated with aspirin; 96 patients were given potassium phenoxymethylpenicillin, and 104 patients oxytetracycline. There was no evidence that either antibiotic had any advantage over aspirin in treatment.

These findings suggest that the indiscriminate exhibition of antibiotics had no advantage over aspirin in treating these uncomplicated cases; however, there was evidence that aspirin itself influenced the course of the illness.

Although there has been a tendency to prescribe antibiotics as antipyretics, the authors suggest that this is unnecessary in a population of young, healthy adults such as those who were studied. There was no evidence in this investigation that the administration of antibiotics influenced either the course of the disease, or the number and quality of the complications. This echoes the opinion expressed by Weinstein (1960), who observed the theoretical possibilities that antibiotics would prevent secondary bacterial invasion in patients with viral diseases was seldom, if ever, attained.

Underwater "Blackout"

F. T. Hodges, "Swimming Pool Accidents, Injuries, and Illnesses," General Practitioner 10(2): 41-45, August 1954 and Albert B. Craig, "Underwater Swimming and Loss of Consciousness," JAMA 176(4): 87-90, April 29, 1961.

In certain situations a person swimming under water may lose consciousness. Such incidents indicate that hyperventilation (excessively prolonged, rapid, and deep breathing) preceding breath-holding and exercise may delay the sensation of the urge to breathe. Most cases involve strong, good swimmers who hyperventilate before attempting an endurance underwater swim without using the breathing apparatus. After rescue and revival the individual frequently states a recollection of "blacking out" while under water without any prior warning or urge to oxygenate. It is believed that the following conditions could exist: During hyperventilation the amount of carbon dioxide in the blood (and stores other than the blood) is greatly reduced; and while the victim is under water, because of the lack of oxygen replenishment and the increased consumption of oxygen from exercise, temporary loss of consciousness from cerebral hypoxia occurs before there is sufficient accumulation of carbon dioxide in the blood to reach the unbearable "breaking point" for breathing. The number of fatal drownings resulting from this process is unknown, but records indicate good swimmers have been known to dive into the water, fail to surface, and drown. Those who are revived usually show no sign of injury or disease.

The following case description is typical. Before an individual goes into and under the water he hyperventilates in order to be able to endure to his goal or win the competition. After this activity, the individual may experience dizziness or tingling of the extremities, and just under water he feels good and confident that he can hold his breath infinitely. Usually, before an urge to breathe, one or all of several events may occur; "spots" may be seen before his eyes, a transient sensation. The urge to breathe may or may not be experienced; if it does, it is often the last recollection of consciousness until the individual is being taken from the water or revived. Observers of such an incident notice nothing amiss while the individual is maneuvering until the latter leaves the water, assuming he is able to, or has drowned.

Several aspects of such an incident are worth noting. Most all victims are considered good swimmers and experienced at underwater swimming. It is the usual practice to hyperventilate before submersion, and most have some goal in mind or are in competition with others. The swimmer usually has an urge to breathe, but has little or no warning that he will "pass out." Where information is available, it is known that swimmers continue to make coordinated movements; one survivor even executed a turn at the end of the pool beyond the point which he remembers. People observing the underwater swimmer have no reason to suspect the existing problem until final collapse ensues. The victim's cerebral function is such that he is unable to make an action appropriate to the situation regardless of whether the train of events can be called loss of

consciousness or a type of retrograde amnesia. Exercise appears to increase the subject's tolerance of developing hypercapnia. Loss of consciousness of the underwater swimmer occurs with little specific warning.

Underwater distance swimming and competition appear to be one of the common maneuvers in recreational swimming, the hazard of which is not widely known among swimmers, their instructors, lifeguards, etc. Accidents of this type will be reduced if the individuals can be made aware of the potential dangers which they subject themselves to in this kind of swimming.

In that the only effective treatment is preventive, it is equally important to consider conditions in which underwater swimming may be comparatively safe. It is also useful to be aware of the risks involved when swimming under the surface. Prolonged or severe hyperventilation compromises the built-in safety factors of the body which inform the swimmer that he should surface, and thus should be discouraged as a preliminary to underwater swimming. Not only competition with others but with oneself seems to be a contributing factor to this type of incident. He may be particularly competitive by nature, will compromise and thus put aside the urge to breathe, a vitally important sensation for which the swimmer must have due regard.

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International Sanitary Regulations: Cholera El Tor

World Health Organization Weekly Epidemiological Record, Geneva, 37(21): 253-256, May 25, 1962.

On 23 May 1962, the Fifteenth World Health Assembly adopted the tenth report of the Committee on International Quarantine which met in Geneva, on 3 May 1962, to consider the question of El Tor infection and its relationship to the International Sanitary Regulations. Extracts of the Committee's report are given below:

"The Committee recalls that in 1957 at the time of its fifth meeting and for some decades prior to that time all reported cases of the disease due to El Tor vibrio had been limited to the Celebes. It was on this basis that the Committee was of the opinion that this disease should not be included in the term "cholera," a quarantinable disease under the International Sanitary Regulations. The Eleventh World Health Assembly endorsed this opinion.

The Committee studied the detailed reports of several outbreaks of El Tor infection (in Sarawak, Indonesia (July 1961), in Macao (August 1961), in Hong Kong (August 1961), in the Philippines (September 1961) and in North Borneo (January 1962)) and considered the views of the experts on these outbreaks, including the conclusions and recommendations of the Scientific Group on Cholera Research, Geneva, 2-6 April 1962, and the findings of the meeting in Manila April 1962, on El Tor vibrio infection.

The Committee, noting that the Scientific Group on Cholera Research having given very careful consideration to all the available evidence about the

epidemiology and clinical features of El Tor infection, recommended that this disease be regarded as essentially identical with classical cholera and dealt with as such, is of the opinion based on the best information and knowledge available, cholera El Tor does not differ from classical cholera in its epidemiological, clinical and pathological aspects and in measures of treatment. The Committee endorses the recommendation of the Scientific Group on Cholera Research in regard to the use of prophylactic vaccines, classical cholera vaccines be used until such time as evidence is produced from experimental or field vaccine studies of the absence of a cross protection between V. cholerae and El Tor vaccines.

The Committee is therefore now of the opinion that cholera, under the definition of quarantinable diseases in Article 1 of the Regulations, should include cholera due to the El Tor vibrio, and recommends that its opinion given at its fifth meeting and endorsed by the Eleventh World Health Assembly should be amended accordingly.

The Committee recognizes the gaps in the fundamental knowledge, both in relation to El Tor and classical cholera, and the World Health Organization is engaged in studies of cholera and cholera El Tor, including standards for and efficacy of the vaccine, which will, it is hoped, supply the necessary information to enable the Committee to keep under review its opinion stated above."

Cholera in 1961

During 1961, 49,951 cases of cholera, with 17,541 deaths, were recorded worldwide.

Apart from India and East Pakistan, where there were 49,504 cases and 17,450 deaths, Sarawak, Hong Kong and Macao were practically the only countries affected; in these 3 countries, the agent isolated was subsequently identified as the El Tor vibrio.

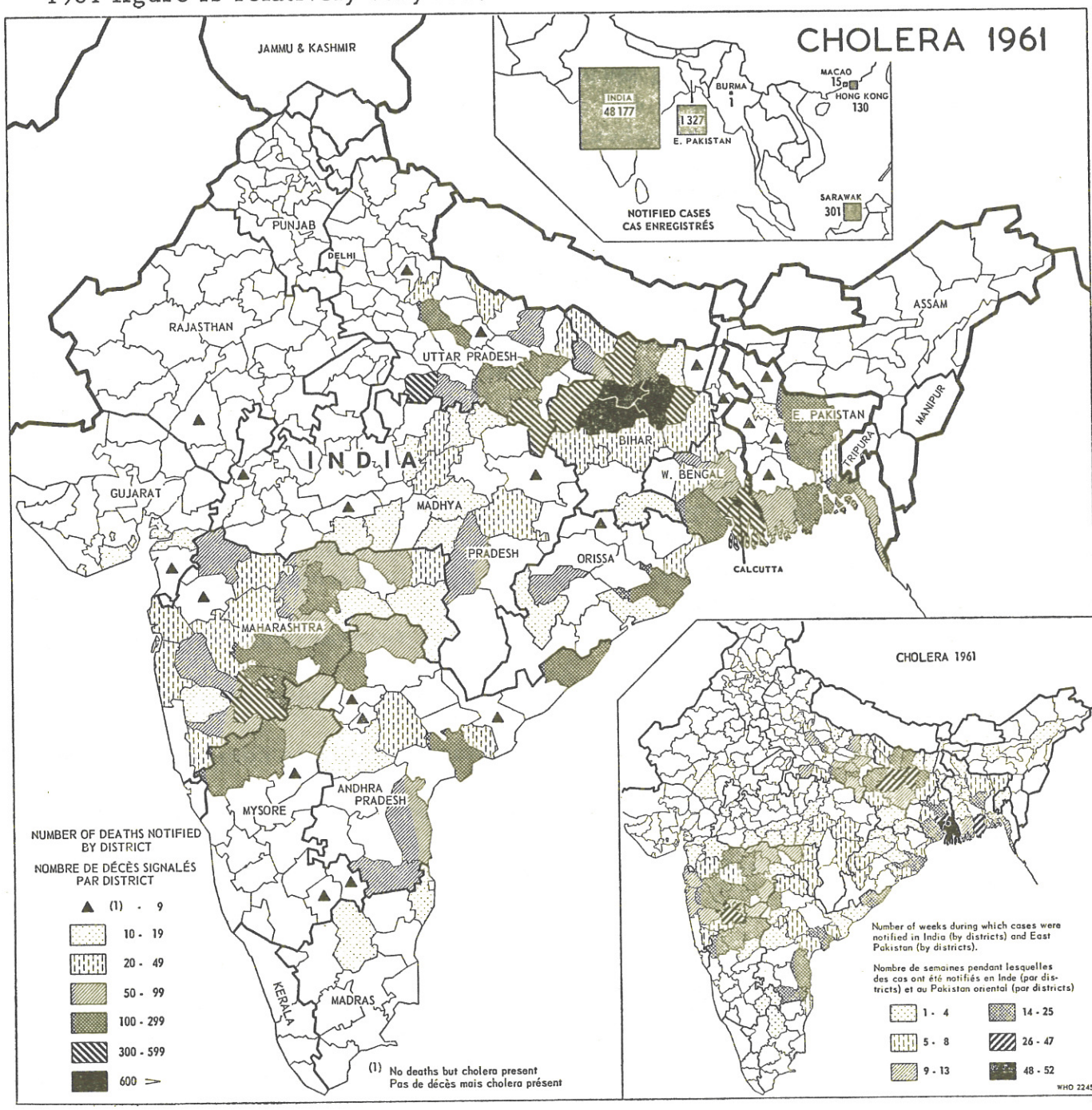
In its long-term evolution, the disease has shown a tendency to decline in India and East Pakistan; the average annual mortality for these 2 countries has fallen from 164,000 from 1945-1949, to 77,000 for 1950-1954 and some 42,000 for the years 1955-1959; in 1960, only 11,000 deaths were recorded, and 17,000 in 1961.

In recent years, the evolution observed in these 2 countries is shown in the following table:

Deaths in East Pakistan and India, by Years 1955-1961

Country	1955	1956	1957	1958	1959	1960	1961
East Pakistan...	14,096	18,471	7,002	10,560	12,735	5,383	861
India.....	14,016	25,013	52,078	50,179	5,488	5,799	16,589
Total	28,112	43,484	59,080	60,739	18,223	11,182	17,450

In East Pakistan (lower Brahmaputra Valley and eastern part of the Ganges Delta), the fall observed in 1960 was accentuated in 1961, although the 1961 figure is relatively very low.



For India as a whole, the 1961 figure of reported deaths, although lower than those of 1956, 1957 and 1958, is about 3 times those of 1959 and 1960.

The map is based on the absolute figures of reported deaths from cholera in each district of India and East Pakistan. It presents the geographical distribution of the disease incidence, and therefore the mortality figures reported

were used in preference to the morbidity ones, in order to give a better idea of the true incidence. A study of this map shows that East Pakistan was still rather seriously affected. It also shows that the 7 Indian States hardest hit were those in the Ganges Valley (Uttar Pradesh, Bihar, West Bengal), in the center of the east coast (Orissa and Andhra Pradesh) and in the center of the west coast (Maharashtra and Mysore). It can be seen that Madhya Pradesh, in the center of the country, was affected to a lesser extent, and that the other states were practically untouched, including those where there had been outbreaks in 1960, both in the north and northwest (Jammu and Kashmir, Punjab) and in the northeast (Assam).

In the 3 states in the Ganges Valley (Uttar Pradesh, Bihar and West Bengal), there were 12,816 deaths, representing nearly four fifths of all cholera deaths recorded in India for 1961.

The inset-map gives the degree of endemicity of the disease, by showing the number of weeks during which cases were notified in each district in 1961. A study of the inset-map shows that cholera cases were reported during more than 26 weeks in only 8 districts in the Ganges Delta and the lower and middle Ganges Valley, and in a district of Maharashtra. It also shows that cases were reported practically without interruption in the Calcutta District - cases notified for 52 weeks; Howrah District—49 weeks; and 24-Parganas District—48 weeks; of West Bengal which were the definite endemic foci.

In conclusion, the following 5 points are stressed for 1961:

1. Classical cholera, except for 1 case in Burma, was reported only in India and East Pakistan.
2. El Tor vibrio epidemics occurred in several countries of the Western Pacific.
3. Increased fall in East Pakistan and rise in India of the disease after 2 years of relatively low incidence.
4. High incidence throughout the Ganges Valley as compared with other areas.
5. The disease is almost permanently present in 3 districts of West Bengal.

—Communicable Disease Branch, PrevMedDiv, BuMed

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The Tuberculin Reactions of Patients Admitted to a Suburban New England Hospital

Leon J. Taubenhaus, Amer Rev Resp Dis 85(5): 700, May 1962.

An intradermal tuberculin test with 5 TU of OT was given to 3,447 patients newly admitted to a suburban New England hospital. Of the 920 males in the series, 199 had positive tuberculin reactions (22%). Only 283 (14%) of the 2,527 females tested had positive reactions. Of the entire population tested, 14% were positive reactors.

When studied by age, the rate of positive tuberculin reactors gradually increased until age 60 and then rapidly declined.

When possible, all positive reactors received a roentgenogram of the chest. Of the 433 patients with positive reactions who were examined by roentgenography, one case of active tuberculosis and 8 cases of healed tuberculosis were found. The active tuberculosis occurred in a young maternity patient in whom the disease was not suspected prior to admission. She had a mild (5 to 9 mm) tuberculin reaction.

Tuberculin testing of new hospital patients on admission constitutes an excellent screening program for tuberculosis. To be effective, it must have the endorsement and interest of the medical staff so that follow-up chest films are obtained in all positive reactors. The tuberculin test is somewhat less sensitive in the patient older than 60. Older patients are also more prone to other chronic respiratory diseases and, therefore, are better served by routine admission chest roentgenograms.

—Tuberculosis Control Section, PrevMedDiv, BuMed

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Chronic Bronchitis, Asthma, and Pulmonary Emphysema

A Statement by the Committee on Diagnostic Standards for Nontuberculous Respiratory Diseases, American Thoracic Society, Medical Section, 85(5): 762-768.

Physicians interested in pulmonary diseases might find this article to be of value:

The definitions and classifications of chronic bronchitis, asthma, and emphysema were written for a new publication, Diagnostic Standards for Nontuberculous Respiratory Diseases. They are printed here in advance of their inclusion in that more definitive edition, in order to provide a trial period during which clinicians, pulmonary physiologists, pathologists, and other interested persons may put them to the test of daily usage in practice.

—Tuberculosis Control Section, PrevMedDiv, BuMed

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Hair Spray Inhalations Suspected in Deaths

New Engl J Med 266(15): 750, April 12, 1962. Science News Letter 81:249, April 21, 1962.

Fifteen cases of storage disease (thesaurosis) pointing to abnormal inhalation of hair spray have been reported since 1958. Three of the patients died, but the illness disappeared in the majority of patients when they stopped using hair spray.

One of the patients who died had used hair spray as often as 15 times daily for 3 or 4 years. Because so many women use hair spray for long periods without ill effects, the investigators pointed out that "significant inhalation and high susceptibility appear to be necessary" to cause abnormal storage of the spray ingredients.

A common ingredient of hair spray, polyvinylpyrrolidone (PVP) was found in the lungs of the 3 cases autopsied, but the scientists were cautious in stating positively that this caused death.

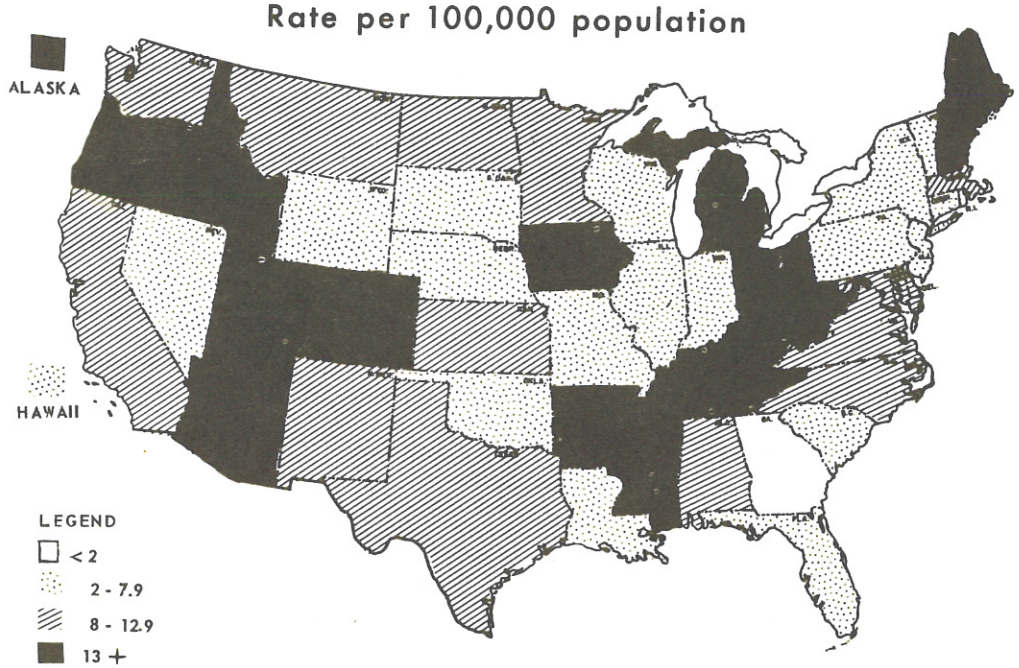
Only 2 hairdressers were reported among the ill patients. Others had used spray on their hair in frequency varying from once a week to 7 or 8 times a day.

Investigations are now under way in an attempt to develop a technique that will identify PVP in the presence of the many chemical constituents of normal and diseased lungs.

Drs. Martin Bergmann, I. Jerome Flance, Ram A. Joshi and Herman T. Blumenthal, all of the Jewish Hospital of St. Louis, Mo., with Drs. Najeeb Klam, St. Francis Hospital, Monroe, La., Primitivo T. Cruz and Philip R. Aronson, both of Chenango Memorial Hospital, Norwich, N. Y. report the study.

* * * * * *

HEPATITIS MORBIDITY BY STATE
1st Quarter 1962
Rate per 100,000 population



The map above shows hepatitis morbidity by State for the first quarter of 1962. The Rocky Mountain and the East North Central and East South Central States had the highest attack rates; this was also true for the first quarter of 1961. The overall U. S. hepatitis attack rate for the first quarter of 1962 was 9.8 per 100,000 as compared to 12.8 per 100,000 for the comparable period in 1961.

(PHS, DHEW)

BUMED NOTICE 6770

From: Chief, Bureau of Medicine and Surgery
To: Naval Hospitals and Activities Having Station Hospitals and Dispensaries

Subj: Bacteriostatic agent in diaper rinse

Ref: (a) American Hospital Association ltr of 25 Jun 1962 to All Listed Hospitals, United States and Canada

Purpose. To bring subject hazard to the attention of medical officers so that preventive measures may be taken and to outline necessary action.

Discussion. Reference (a) reports that several cases of cyanosis in infants in hospitals have been recorded as due to the use of 3, 4, 4', trichlorocarbanilide, a bacteriostatic agent added to diaper rinse. All cases to date were stated to be in premature infants. The investigation as reported by the manufacturer to the American Hospital Association indicates that the chemical is degraded to chloranilines when the diapers are autoclaved. A chemically induced methemaglobinemia may occur after the use of the diaper.

* * * * * *

Evaluation of Effectiveness of Door Locks on Pre-1956 and Post-1955 Automobiles

John W. Garrett, Automotive Crash Injury Research of Cornell University. Public Health Reports 77(5): 369-375, May 1962.

Studies conducted by the Automotive Crash Injury Research of Cornell University showed that there was a substantial decrease in the frequency of door opening, occupant ejection, and fatal injuries when cars were equipped with safety locks. It was also estimated that if no doors opened, the potential reduction in dangerous and fatal injuries would be approximately 27% and that the modified safety door locks in later model cars had achieved about 32% of the potential reduction.

Ice Therapy

Ice is useful both in the home as a first-aid remedy for minor burns and in the doctor's office as a pain-killer, according to Dr. Robert W. Virtue, University of Colorado Medical Center. Ice, said Dr. Virtue, is better first aid for burns than butter, the common household treatment, because it relieves pain and keeps down swelling. Also, if ice is held on the skin for a minute or so before an injection, it deadens the pain of the needle. This would be extremely helpful for children, who fear pain and must take many shots.

(US DHEW PHS Public Health Reports 77(6):544, June 1962)

RESERVE SECTION

Travel and Residence Overseas of Naval Reservists

(1) The term "Overseas" as employed herein is defined to include all areas not within jurisdiction of any naval district.

(2) Except as indicated below, reservists in inactive duty are required to obtain permission to travel or reside overseas for periods in excess of 30 days from the commandant or Chief of Naval Air Reserve Training, as appropriate. The commandant or Chief of Naval Air Reserve Training shall forward one copy of the letter granting permission to travel and reside overseas to the Chief of Naval Operations (OP-922).

(a) Reservists employed in merchant vessels of United States or friendly foreign registry or in United States-owned commercial aircraft will not be required to obtain such permission while following their professions.

(b) Retired reservists when not on active duty are not required to obtain permission to travel and reside overseas. They must, however, report their departure, expected duration of travel, and forwarding address to the cognizant commandant.

(3) Reservists on inactive duty, except those referred to in paragraph (2)(a) above, must give full justification to requests for permission to reside or travel in foreign countries in which their position and personal safety may be jeopardized.

(4) Reservists who have been granted permission to travel and reside overseas shall report their arrival and departure to the United States naval attache, senior United States naval officer, or senior military attache, as appropriate if to be in any country for more than 30 days. If it is impracticable to report in person, a letter report should be made via the most convenient United States diplomatic representative. If they are to be in a country less than 30 days they should report as above if convenient.

(5) Reservists shall report the date of return to the cognizant commandant or the Chief of Naval Air Reserve Training, as appropriate.

(6) Reservists not on active duty or active duty for training including retired personnel, who are residing or visiting in a foreign country, shall not wear the uniform except when attending, by formal invitation, ceremonies or social functions at which the wearing of the uniform is required by the terms of the invitation or by the regulations or customs of the country, and then only with the approval of the appropriate area commander.

(continued on page 40)

DATE	ACTIVE DUTY USN-USNR	SATISFACTORY PARTICIPATION		DRILLS			NROS COURSES (*Students & Instructors*)	CORRESPONDENCE COURSES		COLLEGE AND RESIDENCY TRAINING	RESIDENT SCHOOLS
		50 POINTS	14 DAYS ACTIVE DUTY OR ACTIVE DUTY FOR TRAINING	OTHER THAN NROS	NROS OTHER THAN STUDENTS	NROS STUDENT		OTHER OFFICERS	MEDICAL OFFICERS		
	1	2	3	4	5	6	7	8	9	10	11
7/1/49	NONE	12 points for each year during which at least 12 of the 50 retirement points were earned by means other than Correspondence Courses or gratuitous points.	NONE	NONE	NONE	NONE	NONE	Any course as evaluated.	Any course as evaluated.	NONE	As evaluated for schools completed in present grade -- credited as of 7-1-55.
7/1/50	1 point per month computed date to date - partial months of 15 days or more are credited as one full month. (USNR only)									7/1/50 Completed in grade held on or after 7-1-57 as evaluated by Commandants, BUMED or CNARESTRA with limit of 12 points per fiscal year. Courses completed between 7-1-50 and 6-30-57 are credited as of 7-1-57.	
7/1/53							7/1/53 Any course as evaluated.				
7/1/55	Same as above except two points per month. Creditable 7-1-57. (USNR only)	NONE	12 points per fiscal year for first 14 periods of Appropriate Duty or 14 days Training Duty or Active Duty (not creditable if points previously earned by duty in columns 4, 5 or 6).	12 points per fiscal year for 75% attendance, but no less than 12 drills (not creditable if points previously earned by duty in columns 3, 5 or 6).	12 points per fiscal year for 75% attendance, but no less than 12 drills (not creditable if points previously earned by duty in columns 3, 4 or 6).	12 points per fiscal year for 75% attendance, but no less than 12 drills (not creditable if points previously earned by duty in column 3, 4 or 5).	In grade and designator by Junior and Senior Groups.	In grade and designator by Junior and Senior Groups. Ensigns excluded from Junior Group until 7-1-57, any course credited as evaluated.			7/1/55 Same as above except on "release from active duty date", if released prior to 7-1-57.
7/1/57	2 points per month same as above except points credited when occuring. (USNR only)		7/1/57 Same as above except (not creditable if points previously earned by duty in columns 4 or 5).	7/1/57 12 points per fiscal year for 75% attendance, but no less than 18 drills (not creditable if points previously earned by duty in columns 3 or 5).	7/1/57 12 points per fiscal year for 75% attendance, but no less than 18 drills (not creditable if points previously earned by duty in columns 3 or 4).	7/1/57 NONE		7/1/57 Same as above except Ensigns included in Junior Group after 7-1-57.		7/1/57 Same as above except credited as of 30 June of the fiscal year in which completed.	7/1/57 NONE
7/1/58	Same as above except promotion points for Regular Navy included in present grade for officers selected for promotion subsequent to 6 January 1959							7/1/58 Same as above except effective 6 January 1959, former officers of the Regular Navy are credited promotion points earned in grade upon acceptance of a Naval Reserve comission.	7/1/58 In grade and designator by Junior and Senior Groups. Effective 6 January 1959, former officers of the Regular Navy are credited promotion points earned in grade upon acceptance of a Naval Reserve commission.	7/1/58 Same as above except effective 6 January 1959 former officers of the Regular Navy are credited promotion points earned in grade upon acceptance of a Naval Reserve commission. NOTE: For officers listed on a promotion list, promotion points credited as of the date of the officers request.	
7/1/60	(USN and USNR)		7/1/60 12 points per fiscal year for first 14 days of active duty or active duty for training (not creditable if points previously earned by duty in columns 4 or 5).	7/1/60 12 points per fiscal year for 75% of drills authorized for the unit or units or 75% of periods of Appropriate Duty but in no case less than 18 drills or Appropriate Duty periods (not creditable if points previously earned by duty in columns 3 or 5).	7/1/60 12 points per fiscal year for 75% of drills authorized for the unit or units or 75% of periods of Appropriate Duty but in no case less than 18 drills or Appropriate Duty periods (not creditable if points previously earned by duty in columns 3 or 4).					*NOTE: PROMOTION POINTS MAY BE EARNED WHILE ON THE INACTIVE STATUS LIST.*	

PROMOTION POINT CHART

DATE	ACTIVE DUTY	INACTIVE DUTY	CORRESPONDENCE COURSES	ACTIVE DUTY FOR TRAINING	DRILLS, APPROPRIATE DUTY AND EQUIVALENT DUTY	SPECIAL INACTIVE DUTY TRAINING	GROUP TRAINING DUTY	MEMBERSHIP (gratuitous)
	1	2	3	4	5	6	7	8
Prior to 7/1/49	1 point per day	50 points for each 365 days (May be pro-rated)	NONE	1 point per day	NONE	NONE	1 point per day	NONE
7/1/49		7/1/49 NONE	7/1/49 Points credited on number of assignments completed within each anniversary year		7/1/49 1 point per drill as authorized in BUPERSINST 5400.1 series	7/1/49 1 point per day credited as training duty	7/1/49 1 point per day as authorized by Article H-3603 BuPers Manual	7/1/49 15 points per anniversary year
1/1/53			1/1/53 Points credited by 12 point units as authorized in BUPERSINST 1500.1 series					
2/3/54						2/3/54 1 point per day credited as inactive duty training		

NOTE 1. Points since 7/1/49 for duty in columns 3, 5, 6, and 8 may not exceed 60 points per anniversary year.

2. Subsequent to 7/1/49 points are not creditable for duty in any column performed while on the Inactive Status List.

RETIREMENT POINT CHART

Pay Grade (Rank)	Over 20 Years			Over 22 Years			Over 26 Years		
	Monthly Base Pay	Monthly Value of One Point	Capital-* ized @ 3%	Monthly Base Pay	Monthly Value of One Point	Capital-* ized @ 3%	Monthly Base Pay	Monthly Value of One Point	Capital-* ized @ 3%
O-8-RADM (Upper Half)	$1,300	$.09028	$36.11	$1,350	$.09375	$37.50			
O-7-RADM (Lower Half)	1,175	.08160	32.64						
O-6-CAPT	860	.05972	23.89	910	.06319	25.28	$985	$.06840	$27.36
O-5-CDR	745	.05174	20.70	775	.05382	21.53			
O-4-LCDR	630	.04375	17.50						
O-3-LT	525	.03646	14.58						
WO-4-CWO	528	.03667	14.67	543	.03771	15.08	575	.03993	15.97**
WO-3-CWO	470	.03264	13.06	487	.03392	13.57	506	.03514	14.06
WO-2-CWO	417	.02896	11.58	440	.03056	12.22			
WO-1-WO	390	.02708	10.83						
E-9-MASTER CPO	430	.02986	11.94	440	.03056	12.22			
E-8-SENIOR CPO	370	.02569	10.28	380	.02639	10.56			
E-7-CPO	350	.02431	9.72						
E-6-PO1	290	.02014	8.06						
E-5-PO4	240	.01667	6.67						
E-4-PO3	190	.01339	5.36						

* Capitalized @ 3% represents the money you would have to have in the bank to pay 3% annually, the value of one point monthly.

** WO-4 for over 30 years service: Base Pay = $595. Monthly value of one point $0.04132.

THE VALUE OF A RETIREMENT POINT

* see credit note page 40

(7) Reservists shall not use their official naval titles in connection with public appearances while overseas unless authorized by the appropriate area commander.

(8) Limitations on participation in training by Naval Reserve personnel who reside or travel overseas are contained in article H-4211, BuPers Manual.

(9) Procedures for the maintenance and custody of the records of inactive Naval Reserve personnel who reside or travel overseas are contained in articles H-2204 of BuPers Manual for officers and H-2212 for enlisted personnel respectively.

—BuPers Manual
Article H-31401

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* The charts on pages 37, 38, and 39 were prepared by the Reserve Officers Training Activity, Omaha, Neb.

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